

JERROLD

435-459

POWER SUPPLIES

MODELS RPS-30, RPS-15, RPS-17

FOR TRANSISTORIZED CATV EQUIPMENT

DESCRIPTION**MODEL RPS-30**

Jerrold Model RPS-30 is a fully-regulated 30-volt ac power supply for energizing solid-state amplifiers in the trunk and feeder lines of tv distribution systems. Units are located as required at various repeater stations in the main trunk. One RPS-30 provides a maximum of 12 amperes at 30 volts ac to power a fully-loaded location in the main trunk, i.e. 3 Model TML-1, 3 Model TBA-1, 3 Model TBA-2, and 48 Model TLE-1 amplifiers.

Model RPS-30 is energized from a line voltage source which can vary from 95 to 130 volts to provide a voltage output of 30 vac $\pm 1\%$. This output is held constant within 2% for current load changes between 4 and 12 amperes. The ac output of Model RPS-30 is available at three terminals on the chassis of the unit. At trunk line locations, Jones socket J1 is used to supply power to Model TML-1 via an interconnecting cable (supplied with Model RPS-30). The ac output is also available at either of the RF & AC terminals. Each of these terminals has an associated RF terminal which permits rf signals to be bridged thru.

Model RPS-30 also features a surge arrester diode across the input to the primary of its transformer to provide protection against surge voltages.

MODEL RPS-15

Jerrold Model RPS-15 is an unregulated power supply and may be used in place of Model RPS-30 when the source voltage is a fairly-constant 117 volts ac and where the load does not exceed six amperes. Output is a minimum 28 volts ac at 6 amps.

Model RPS-15 will hold the voltage output constant within 5% from no load to full load with a constant 117-volt ac input. The unit has the same surge arrester protection as Model RPS-30 and incorporates a 10-amp fuse in the transformer output circuitry. The balance of the output circuitry is the same as that in Model RPS-30.

MODEL RPS-17

Jerrold Model RPS-17 is a regulated dc power supply for solid-state bridging distribution amplifier Model TBA-1 at locations where Model TML-1 is not used. The unit may be energized from any 20 to 30-volt ac source (Jerrold Models RPS-30, RPS-15, CPS-4) to provide a regulated —17 volts dc at up to 0.8 amperes. The ac input voltage to Model RPS-17 is available through an internal isolation network to power feeder lines via Model TBA-1.

SPECIFICATIONS

	RPS-30	RPS-15	RPS-17
Electrical Input	95-130 v ac	117 v ac	20-30 v ac
Output	30 v ac $\pm 1\%$ for line voltage between 95 and 130 v ac and held within 2% for load variations between 4 and 12 amps.	28 v ac min. at 6 amps, 30 vac max. at no load, for line voltage of 117 v ac. Held within 5% for load variations between 0 and 6 amps.	—17 v dc @ 0 to 0.8 amps on pin 2 of J1; 20-30 v ac @ 6 amps max. on pin 4 of J1
Match	J2, 3, 4 and 5: 24 db min. (1.14:1 VSWR) from 54 to 216 mc	J1, 2, 4 and 5: 24 db min. (1.14:1 VSWR) from 54 to 216 mc	NA*
Isolation	J2 or 3 and J4 or 5: 60 db min.	J1 or 2 and J4 or 5: 60 db min.	NA
Insertion Loss	J2 to 3 and J4 to 5: 0.25 db max.	J1 to 2 and J4 to 5: 0.25 db max.	NA
Output Ripple	NA	NA	5 mv p-p
Mechanical Housing (Type)	Aluminum	Aluminum	Copper
Finish	Satin Black Paladine	Satin Black Paladine	Black
Overall Dimensions	19" x 7" x 6"	19" x 3 $\frac{1}{4}$ " x 4 $\frac{3}{4}$ "	3 $\frac{1}{2}$ " x 1 $\frac{3}{4}$ " x 7 $\frac{3}{4}$ "
Net Weight	30 lbs.	7 $\frac{1}{2}$ lbs.	1 $\frac{1}{2}$ lbs.
Mounting	Rack, wall or deck	Rack, wall or deck	Wall or deck

INSTALLATION

ACCESSORIES SHIPPED WITH EQUIPMENT

RPS-30 AND RPS-15

- 1 Cable assembly (Part #B659-140) for connection of power supply to associated equipment.
- 2 Brackets for rack mounting.

RPS-30 ONLY

- 8 Mounting screws #10-32 x 1/2

RPS-15 ONLY

- 4 Mounting screws #10-32 x 3/8
- 4 Mounting screws #6-32 x 1/4

INSTALLATION PROCEDURE

GENERAL

JT-404 cable and FHC-404 connectors must be used for jumper cables carrying ac.

1. Mount power supply (supplies) in appropriate weather cabinet.
2. Connect power supply to associated equipment.
 - a. At location with Model TML-1 (see fig. 1).
 - (1) Connect J1 on Model RPS-30 (or J3 on RPS-15) to J4 on Model TML-1 using cable assembly shipped with power supply.
 - Note: At these locations, the RF and RF/AC connections on Models RPS-30 and RPS-15 are normally not used and should be capped.
 - (2) Plug RPS-30 or RPS-15 into a 117-v ac source.
 - b. At AGC location, with Models SCA-213, AGC-213, RPS-17 and TBA-1 (see fig. 2).
 - (1) Plug P1 of Model RPS-17 into J1 of Model RPS-30 (or J3 of RPS-15).
 - (2) Plug P5 of Model TBA-1 into J1 of Model RPS-17.
 - Note: At AGC locations, one or both sets of RF and RF/AC terminals on Models RPS-30 and RPS-15 may be used. RF **never** passes through the power supply. AC may be sent from either RF/AC fitting but **never** enters the power supply and is blocked from both RF terminals. RF may enter or leave any of the RF and RF/AC terminals.
 - (3) Same as a.(2).

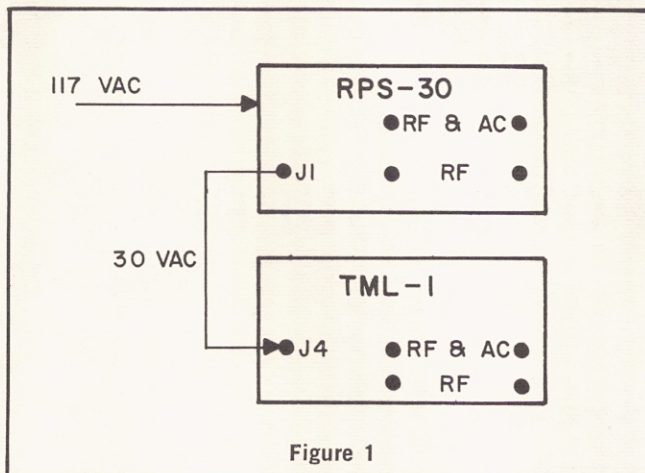


Figure 1

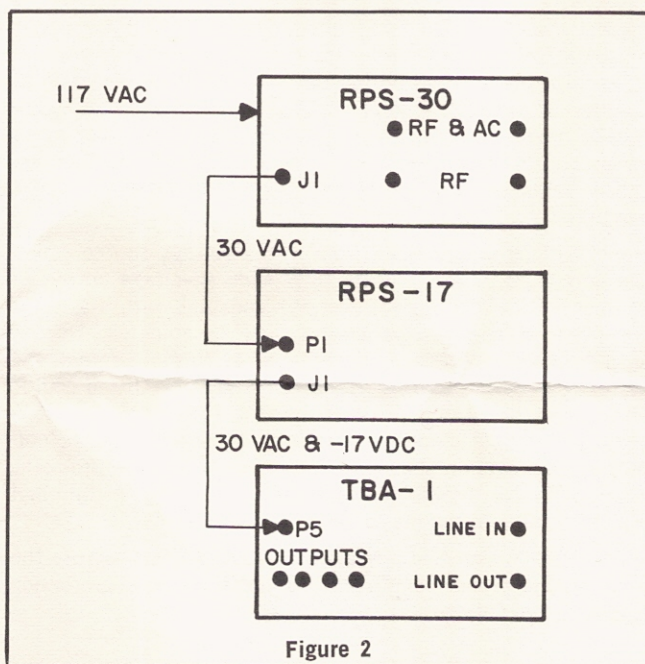


Figure 2

REPLACEMENT PARTS LIST MODEL RPS-30

ASSEMBLY				REF. DWG. NO.:
ITEM	SCHEMATIC DESIGNATION	QTY.	DESCRIPTION	JERROLD PART NO.
1	C1, 3	2	CAPACITORS 330 pf, 10%, CRL D6-331	123-123
2	C2, 4, 5	3	.01 mf GMV cer. disc	124-031
3	J1	1	CONNECTORS 4-pin socket Beauchaine S-3304-AB	B184-018
4	J2, 3, 4, 5	4	F-61A chassis fitting	B821-155
5	CR1	1	DIODE Voltage suppressor 70 v peak input GE 6RS21SA2D2	137-253
6	DS1	1	INDICATOR LIGHT Neon	102-514
7	None	1	LINE CORD 3 wire, 3' cord	659-130
8	R1	1	RESISTOR 100 k, 10%, 1/2 w	112-614
9	S1	1	SWITCH Toggle spst	162-001
10	T1	1	TRANSFORMER Power	C141-207

REPLACEMENT PARTS LIST MODEL RPS-15

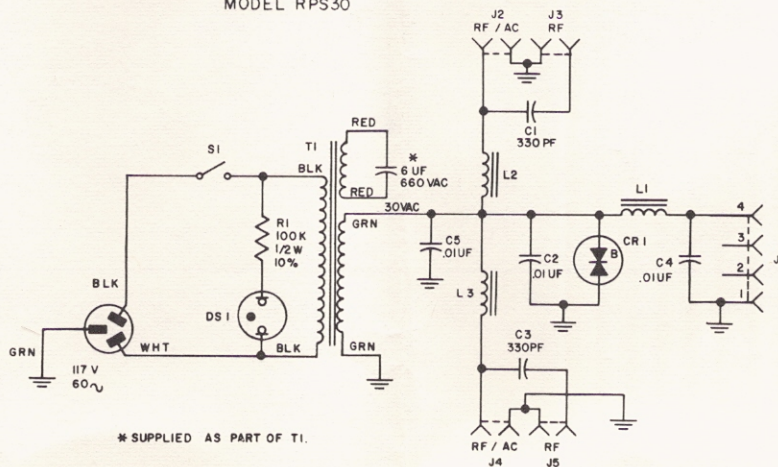
ASSEMBLY			REF. DWG. NO.:	
ITEM	SCHEMATIC DESIGNATION	QTY.	DESCRIPTION	JERROLD PART NO.
1	C1, 3	2	CAPACITORS 330 pf, 10% CRL D6-331 .01 mf GMV cer. disc	123-123
2	C2, 4, 5	3		124-031
3	J1, 2, 4, 5	4	CONNECTORS F-61A chassis fitting 4-pin socket Beanchaine S-3304-AB	B821-155
4	J3	1		B184-018
5	CR1	1	DIODE Voltage suppressor 70 v peak input GE 6RS21SA2D2	137-253
6	FS1	1	FUSE 10 amp 3AG	101-204
7	DS1	1	INDICATOR LIGHT Neon	102-514
8	None	1	LINE CORD 3 wire, 3' cord	659-130
9	R1	1	RESISTOR 100 k, 10%, 1/2 w	112-614
10	S1	1	SWITCH Toggle spst	162-001
11	T1	1	TRANSFORMER Power	C141-210

REPLACEMENT PARTS LIST MODEL RPS-17

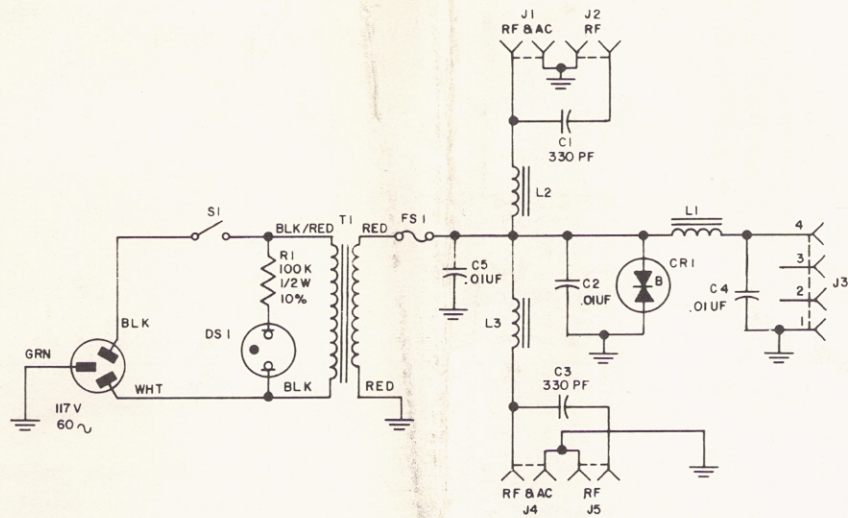
ASSEMBLY			REF. DWG. NO.:	
ITEM	SCHEMATIC DESIGNATION	QTY.	DESCRIPTION	JERROLD PART NO.
1	C1, 3, 6, 40	4	CAPACITORS .01 mf GMV cer. disc 1000 pf, GMV cer. disc 1000 mf 150 v elect. 100 mf 150 v elect.	124-031
2	C2	1		123-115
3	C4	1		127-061
4	C5	1		127-050
5	J1	1	CONNECTORS 4-pin socket 4-pin plug Barchaine P-3304-CCT-L Tip jack, red	B184-018
6	P1	1		184-047
7	TP1	1		185-112
8	CR3	1	DIODES 200 piv, 140 v rms, 6 amp. Solitron SOD 200KS Solitron #CER-68A Zener 4.7 v ±5%, 400 mw Motorola 1N750A	137-726
9	CR4, 5	2		137-718
10	CR6	1		137-724
11	R30	1	RESISTORS (in ohms) 1, 5%, 2 w 470, 5%, 1 w 620, 5%, 1/2 w 150, 5%, 1/4 w 2.7 k, 5%, 1/4 w 100, pot. 560, 5%, 1/4 w 47, 5%, 1/4 w	110-105
12	R31, 32	2		112-318
13	R33	1		112-335
14	R34	1		112-966
15	R35	1		112-931
16	R36	1		118-025
17	R37	1		112-104
18	R38	1		112-992
19	RT1	1		THERMISTOR 28.2 ohms @ 25° C
20	Q1	1	TRANSISTORS Factory-selected Factory-selected Factory-selected	130-104
21	Q2	1		130-122
22	Q3	1		130-123

SCHEMATIC

REGULATED POWER SUPPLY AC
MODEL RPS30

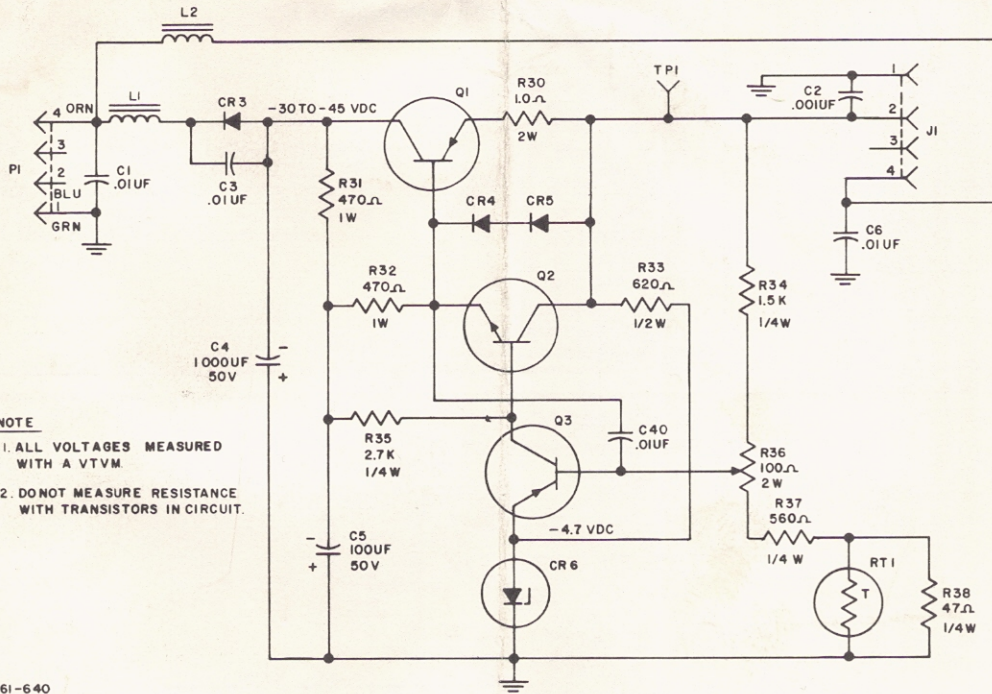


SCHEMATIC REMOTE POWER SUPPLY AC MODEL RPS 15



C86I-639

SCHEMATIC REGULATED POWER SUPPLY DC MODEL RPS 17



C86I-640

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JERROLD ELECTRONICS • PHILADELPHIA, PA. 19132
COMMUNITY SYSTEMS DIVISION

JERROLD
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